Office of Water Supply Planning

Drought Management Workshop Summary

Va. Dept of Forestry Training Room, Fontaine Research Center, Charlottesville VA
Monday, June 16, 2008
1:00 – 4:00 pm

Workshop Agenda

1:00 – 1:10 pm	**Welcome & Introductions**
1:10 – 1:35	**DEQ Drought Analysis Tool Demonstration,** Robert Burgholzer, Surface Water Modeler
1:35 – 1:40	**Drought Tool Q & A**
1:40 – 2:10	**What You Need to Know About Drought Repsonse,** Scott Kudlas – Director, Office of Surface and Ground Water Supply Planning
2:10 – 2:15	**Drought Response Q & A**
2:15 – 2:45	**Drought Planning Work Session Topics Brainstorm**
2:45 – 3:00	**Break**
3:00 – 3:55	**Drought Planning Work Sessions**
3:55 – 4:00	**Closing Comments**

Adrienne Averett welcomed the workshop participants, reviewed the workshop agenda and format, and introduced the DEQ water supply planning staff.

DEQ Drought Analysis Tool Demonstration

Robert Burgholzer discussed the goals of the DEQ's drought planning web tool, briefly reviewed the drought indicator data and graphics, provided a tour of the website, and discussed how this tool can help localities with drought planning and response.

Drought Tool Question and Answer*:*

1. ***Using this tool can you determine the age of the ground water and ground water recharge?*** Ground water recharge in Virginia typically occurs from November to February, when evapotranspiration is reduced due to the trees/plants losing their leaves. Examine the ground water graph(s) for you locality/region - the red line on the graph tracks well level. You'll notice spikes in the well level reflect precipitation inputs and you can track whether those spikes result in true ground water recharge (well levels maintained in the green band/normal percentile range and above). You can also use these graphs to best guess ground water conditions in the near future – examining the graph, what are current ground water levels? Based on trends presented on the graph, what percentile range will ground water levels most likely fall within over the next month or next season?
2. ***How can you tell baseflow rate?*** When you look at the stream flow duration curves (click the "flow" box) for your locality or planning region, the "peaks" represent storm flows and the "valleys" represent base flows. The median line (the yellow line through the green band) of the duration curve represents normal base flow conditions. The "valleys" of the current flow conditions (red line) represent the current base flow conditions.
3. ***Does the precipitation indicator show intensity and duration of rainfall?*** The bar graphs show only total period precipitation, not precipitation intensity, in order to compare weekly observed versus weekly normal precipitation values; additionally, the graphs track deviation from normal (sum of observed versus sum of normal).
4. ***Audience comment: need to extend ground water monitoring network to improve local knowledge of ground water conditions.***

5. ***Can reservoir levels be added to the drought tool indicators?*** Yes, especially if the reservoir levels are posted real-time on the respective reservoir operations webpage. Please let Robert know if you would like reservoir levels added to your regional drought indicators suite.

Drought Response Planning Presentation

Scott Kudlas discussed the indicators used by the Virginia Drought Monitoring Task Force to determine drought status, the current statewide drought status, state and local roles in drought response, and tips and tools for developing local or regional Drought Response and Contingency Plans (9VAC25-780-120).

Drought Planning Question and Answer:

1. ***What about farms that own land and withdraw from a river/stream during drought?*** Depending on the circumstances of the agricultural withdrawal, a VWP permit may be needed for this. Scott noted that he has given presentations at various Farm Bureau Board of Directors meetings and that the agricultural community is receptive to being part of the drought planning and water supply planning process. To better understand the agricultural water uses and needs in your planning area, invite them to the planning table.

2. ***How do you handle lawn irrigation and wasting of water during drought?*** We can help localities get the water conservation message out. Localities are enabled to adopt ordinances addressing wasteful water use and can enforce them. DEQ expects that legislative action will take place in the near future that addresses this issue particularly within the Ground Water Management Area. However the key to reducing wasteful water use is probably finding the price point – that point where inefficient irrigation and wasting of water is cost prohibitive for most people. While there will always be some who will pay the price no matter how high, they probably do not represent a significant component of a systems' overall use.

Work Session Topic Brainstorming

Workshop participants were encouraged to brainstorm drought work session topics based on where they were in the drought planning process, coupled with the information from Robert and Scott's presentations. Participants were asked to think about the one step in the drought planning process that they wanted to work on during the work session period. Participants were given a voting dot and voted for their preferred work session topic.

Work Session Topics List and Respective Votes:

- Drought Responses: especially businesses (5 votes)
- Self-Supplied Well Users and Statute 293 (5 votes)
- Counties and Their Service Authorities: roles & responsibilities (5 votes)
- DEQ Drought Analysis Tool Session: how the tool can be used with multiple triggers and responses (6 votes)
- Adoption of Local Plan: how to get buy-in from council (no votes)
- Question & Answer with Scott (3 votes)
- Tools: how to get started (2 votes)
- Regional Planning: working together and assimilating indicators and responses (4 votes)
- Regional Drought Ordinance: generic or specific (no votes)

Three work session stations were organized from the ranked topic list. After the break, workshop participants self-selected the session they wanted to participate in. Since the work sessions were being held concurrently, participants were encouraged to use the "law of two feet" to roam between sessions of interest.

- ***DEQ Drought Analysis Tool Work Session*** (13 votes total)
  - Drought Responses: especially businesses
  - Triggers and Responses
  - Tools: how to get started

- ***Regional Drought Planning Work Session*** (9 votes total)
  - Working together
  - Assimilating indicators and responses
  - County and their Service Authorities: roles and responsibilities
- ***Drought Planning Questions Work Session*** (8 votes total)
  - Self- supplied well users & Statute 293
  - Q&A with Scott Kudlas

DEQ Drought Analysis Tool Work Session

This work session focused on businesses and water use restrictions (responses) and selection of drought indicators. Work session attendees included: Carol Corker, Chris Edwards, Steven Hall, Frederick Maisch, Bugs Phillips, Linwood Pope, Josh Seaman, Robert Steidel, Laurens Van der Tak, Alex Vanegas, James Warf, Beate Wright, Robert Burgholzer (facilitator), and Bill Norris (note taker).

Business and Water Use Restrictions

How can you make restrictions to water use during conservation periods, such that they have the least amount of impact on economically valuable water uses?

- This answer to this question is implicit in the drought planning process. Triggers and the resulting conservation actions (both voluntary and mandatory) can work together to limit impact on operations whose economic viability relies on water use. When choosing conservation methods, certain uses can be targeted, so that uses with little or no economic impact (such as lawn watering or home car washing) are reduced first. By choosing multiple stages of drought (perhaps even exceeding the 3 categories required by the planning regulation), a locality can gain an even greater level of control over this process.
- Of paramount importance during this process is having a good inventory of water use types and amounts in your water supply plan. This will enable you to see what magnitude of reductions can be achieved by different sectors of the user community. Computer models can be very helpful in this process, as they may allow you to run different reduction schemes against the drought of record to insure that the economic goals are achieved along with the water use reduction goals.
- Some users mentioned that they felt that this type of approach (targeted restrictions) was not favorable, since the user community should have the feeling that they were all "sharing the load" of reductions. (However, see the next bullet below, voluntary participation in demand management might address this concern).
- Need to educate the businesses in order to get voluntary participation in a Demand Management effort before droughts occur – i.e., if you have permitted users that are drought sensitive, the best approach is to try to get them to operate as efficiently as possible prior to any drought, so that you can focus on the other users with less economic dependence on water during drought. Need to look at large agricultural users in the region/area and work with them in a public education effort BEFORE there is a drought. One strategy may be to get them to agree to do their watering/irrigation at night, in order to use less water. All of this type of demand management outreach may be part of a good business recognition program.
- Participants began to discuss one of the central economic questions pertaining to drought planning, i.e., "***What can a community do if it is trying to attract businesses that may be a constant large user of water, while still addressing the need for a drought management plan?*** ". From DEQ's standpoint, this is the very best reason to have a drought plan that is well thought out, and has strong public communication components, so that you can be sure to protect the water-dependent economic activities under the most serious conditions. General recommendations were that you need to: 1) be able to factor in the potential for future use of water and future growth based on the current and historic use and availability of water in the area/region, 2) look at the worst drought of record and then at the potential water use of this future water user and determine if there enough water for this future potential need, and 3) locate areas that you can reduce water use in order to accommodate the new user. Essentially, have a good water supply plan with good quality existing use information, have a proactive and thorough demand management program, and have a really well thought out, and well communicated

drought contingency plan. If you have all of those things, you will put yourself in the best possible position for attracting new businesses, and maintaining water-dependent economic activity during droughts.
- Communication is a key. Everyone needs to be aware of the plan and their role, whether voluntary or mandatory, in addressing the drought response plan for the locality or region.
- A question was raised over a recent change in a well withdrawal permit limit change that will result in different estimates of available supply in part of a draft water supply plan that has already been submitted. The Greensville/Sussex/Emporia draft water supply plan (grant deliverable) contains well permit limits that have been recently changed. Since this was just a grant deliverable and the draft plan has not been compiled or submitted, it was suggested that they might want to take this opportunity to make the appropriate adjustments prior to "official submittal".

Choosing Drought Indicators/Triggers

If you have a locality with a single source type (i.e., all surface water, or all groundwater), and monitoring data pertinent to that source type in the area, should you use other, surrogate metrics outside of the area to reinforce drought decisions? In other words, if one locality was entirely supplied by stream flow, and there was a USGS gage in the area of the withdrawal, should they bother to include the levels in a groundwater well in some adjacent area, or the flow gage indicators in a separate area?

More importantly, perhaps, how do indicators and drought stage declarations in sub-regions interact with each other, and with the larger region as a whole?

- ***Does the regional status override all of the sub-regions (both coming into and going out of a drought event)?***
- ***Is it better to stick with a single drought status for an entire region, rather than having any sub-regional declarations?***
- ***Conversely, is it better to have sub-regional declarations, since these are bound to be more congruent with the citizens own perception of conditions?***

Answers/Dialog:

- Choosing local, source specific indicators was seen as the best approach, as opposed to using surrogate indicators, unless it was absolutely unavoidable. DEQ staff noted that all areas could use precipitation in addition to any other local indicator, thus providing a minimum of 2 indicators for the majority of localities. A consensus emerged that the triggers were themselves only triggers to begin dialogue, and that designating a group of officials to serve as the local drought task force was of the utmost importance. Thus, the trigger would indicate that a meeting must be held to discuss any extenuating circumstances surrounding the status of the indicators, and to make the final decision on whether or not to declare an official drought condition.
- The interaction between region and sub-region became a lively discussion of experiences and speculations from a large portion of the participants.
    - The officials and consultants from Purcellville related their experiences during the most recent droughts in which they declared a local drought status that was more severe than the regional status, leading them into conservation measures before others could. They felt that it was helpful to have a difference in status, and that when reports about the drought were read, they would detail that the greater region was in a drought watch, and that there was a drought warning for the Purcellville sub-region (and one or two others). It seemed that they thought the communication challenge was worth the added level of information.
    - The official from Charlottesville noted that the county of Albemarle had recently adopted different responses to drought, which caused a good deal of confusion during the 2007 drought. While the triggers and status determinations went into effect at the same time (following the declaration by the RWSA) the types of restrictions differed.

- Most members of the group leaned toward the idea of having individual declarations for sub-regions, as well as an overall regional status, however, the consensus of the group was that whatever indicators were used in sub-regions, they should all have the same numerical (i.e. percentile) thresholds in order to promote consistency. Obviously, the need for these is governed by a variety of factors, probably the most important being the bounds of the water authority, since that is where the delineation of the shared resource is.
- Sentiment leaned toward the need to develop a set of triggers for when you come out of the drought plan (or simply state that the triggers call for a committee convening in both directions). A region may have a number of localities with specific local triggers and action steps that may not be out of drought conditions while another locality in the same region may be already out of drought conditions. Need a specific plan on how to address. Need to know what constitutes when you can come out of the drought management efforts.
- Sources of data and various available data sets will be posted on the DEQ website.
- DEQ will try to work on sets of regional indicators that might be useful as a first brush look at needed indicators that a locality or region could use in their drought plan.
- Some discussion went around with ideas of how to better communicate the status of reservoir sources, such as: "% full", or # of days of storage, or # of gallons in the reservoir. Similarly, DEQ staff noted that they would be looking at expanding probabilistic measures.

Regional Drought Planning Work Session

This work session focused on the dynamics of regional drought planning such as, working together, assimilating drought indicators and responses, and determining roles and responsibilities (especially between service authorities and counties). Work session attendees included: John Bragg, Beau Caire, Clara Cieri, Barry Clark, Matt Cook, Melody Fowler, Normand Goulet, Wafa Hasan, Jennifer Hibbert, Jennifer Hoover, Nate Litteral, Bob Mitchell, Gene 'Bugs' Phillips, Carl Schmitt, Beate Wright, Adrienne Averett (facilitator), Andy Putscher (note taker), and Sara Jordan, Tammy Stephenson, and Mary Ann Massie (supporting note takers).

When a planning region doesn't mirror the state drought region and one of the planning localities is contained within a different state drought region, what happens when the Governor declares emergency and only that one locality is within the designated state drought region? What does the WSP region do?

- There is no need to split the local planning area because of the state drought regions. Once these local planning areas are known, we can account for them at the state level to avoid this circumstance. The region should track the status of drought conditions in your planning area and periodically check your local drought indicators and status against the applicable designated drought evaluation region in which the majority of the jurisdictions in your planning area reside.
- If the Governor declares a drought emergency it will apply to all jurisdictions in your planning area when a declaration is made for the region in which the majority of the jurisdictions in you planning area reside.
- Comment on Fairfax City and Fairfax County's interactions during the last drought. Fairfax City was requested to put emergency restrictions in place -- in exchange Fairfax County Water Authority was willing to open a pre-existing interconnection and to sell more water to Fairfax City as needed to meet the "essential" water demand that remained after conservation measures were implemented. Fairfax County Water Authority service area regular customers were not on mandatory restrictions during this period. The Metropolitan Washington Cooperative Water Supply Agreement which includes Fairfax County Water Authority but not Fairfax City, have a Drought Response Plan that includes local indicators and their restrictions are self-executing. The state deemed their regional Drought Response Plan equivalent to the state's and their past actions demonstrated that the region would respond appropriately to their triggers. Their program actually allocates the amount of water each jurisdiction can withdraw during drought. Given this circumstance, Fairfax County Water was not included in the Governor's Executive Order. It is

anticipated that the same approach can be used in the future with any locality or region that demonstrates comparable levels of program development and implementation.

What do you do when the Service Authority and County don't always mesh when it comes to drought?

- Augusta County looks to the Service Authority to make voluntary water conservation recommendations. Mandatory water conservation responses are mandated by the county. All sources in the Augusta County Service Authority are groundwater.
- Loudon County Administrator has control over drought declaration. The Service Authority doesn't direct any voluntary or mandatory action.
- A possible work session between DEQ WSP staff, the Rapidan Service Authority, and Greene County representatives was suggested to discuss regional drought planning and drought response roles.

What are some of the ways to garner cooperation between local governments and water purveyors and share responsibilities for declaring, requesting and requiring water use restrictions given their sometimes conflicting priorities?

- From Purceville example - start the process early; get elected official backing and advocacy going within view of the public.
- Drought Watch is earliest stage – County can assist the service authority by declaring watch status on behalf of the service authority and use county government process as forum for public input and awareness.
- Service Authorities noted that they can do direct mailing to "get the word out" on voluntary restrictions in addition to bill stuffers.
- County newspapers were noted as a good source for drought related public outreach notices.
- Regional grassroots awareness is enhanced by consistency across political lines.
- Form a regional drought advisory committee of local government staff, service authority staff, and beneficial water users to outline responsibilities and develop and implement the regional drought plan.
- The Upper Shenandoah River Basin Regional WSP group is looking at using the Central Shenandoah PDC as a regional clearinghouse for drought information. Localities and service authorities are thinking of posting their declared drought stage on CSPDC's website to track regional drought conditions and show what stage they are in.
- DEQ's water supply planning and environmental education staff may be able to assist regions with drought public education and outreach activities.

What does a regional drought plan need to look like? Beyond narrative does it include other components like ordinances? Should ordinances be general or detailed?

- Your drought response and contingency plan should describe the unique characteristics of water resources in your regional planning area to provide an overview of those sources and priority water users in your region. In addition your drought response plan should define drought stages (at least three – watch, warning, and emergency), list drought indicators/triggers for each locality, and identify your water conservation responses for each drought stage.
- Consider other tools when evaluating source-specific drought triggers, such as additional drought indicators (precipitation and/or Palmer Drought Severity Index), DEQ's drought analysis tool website, and water plant operation requirements. Precipitation may be a good drought indicator for the region as a whole.
- When determining drought responses, identify essential and non-essential uses within your planning region and those water conservation responses that will help you meet your water use reduction goals at each drought stage. Based on the drought response plans reviewed by DEQ so far, drought response measures are typically the same across the region, as surface and ground water are interconnect, most localities in the regions are sharing water resources and have similar beneficial users defined.

- Regarding your Drought Response Ordinance, review the "recommended components of a model drought management ordinance" (see handout). Water surcharges should be included in the ordinance if they are a water use reduction measure. Because your drought plan is a living document and subject to revision, it is good to keep your ordinance general and have it reference and support your regional drought response plan.

Are large, self-supplied users (agricultural, industrial, commercial, manufacturing, institutional, etc.) needed at the regional drought planning table?

- The approach to this will vary depending on the nature of water sources and water users in your planning area. You need to evaluate priority water uses in your planning area. Priority water users are not necessarily the largest users of water in your planning regions. As part of this process, you should also evaluate how close priority water users are to public water supplies.
- Self–supplied users need to be involved in the planning process to advocate for that portion of their water use that is essential and recognized as a priority. Also, these users may have different drought indicators and triggers than the community water systems and/or other users in the planning region.
    - For example, in the Shenandoah Valley and other rural regions in Virginia having an agricultural user representative at the table will help characterize the nature of agricultural water needs that are essential (i.e. seasonal timing for this year's crops, keeping livestock alive, etc.) and those drought indicators that reflect drought status for the agricultural community (e.g. Palmer Drought Severity Index, precipitation, etc.).
- The Accomack-Northampton PDC representative commented that politics and policy are touchy subjects for competing water users especially on the Eastern Shore.
    - In competing water use sensitive areas, the key is to identify existing advisory groups that deal with one another as water users already (e.g. Ground Water Steering Committee on the Eastern Shore), or form a regional drought planning committee to get folks used to working together on drought response plan and any water use issues before a situation or conflict arises.
- Additionally, DEQ water supply planning staff can help facilitate bringing competing users to the table together.

When are regional water supply plan stakeholder meetings usually held?

- It really depends on the region's preference. Some regions are having stakeholder meetings to present and gain stakeholder feedback on each regional plan development phase (e.g. Phase I – regional water source, water use, existing resource conditions data collection; Phase II – regional water demand projections, water demand management information, and statement of need and alternatives; Phase III – draft regional water supply plan including drought response plan). Other regions are choosing to complete their regional water supply plans and present them for public comment at the required public hearing (9VAC25-780-50.C.11).

ANPDC noted that "water" is the waters of the Commonwealth and cooperative, regional water supply and drought planning is necessary to sustain quality water resources for all beneficial uses.

Drought Planning Questions Work Session

This work session focused on a drought planning question and answer period with Scott Kudlas, Director of DEQ's Office of Surface and Ground Water Supply Planning. Work session attendees included: Tamara Jo Ambler, Tom Christoffel, Carleen Loveless, Barbara Terry, Heather Vanderweide, Scott Kudlas (facilitator), and Jenny Holloway (note taker).

What are some suggestions for educating the public when we are in a drought watch?

- You can use public service messages, or put up signs that say something like "we're in a drought, please conserve".

- Albemarle County commented that water use actually went up when they posted 'drought watch' signs because people thought they would water their plants (etc.) before drought conditions got worse.
- Scott noted that Albemarle's comment is part of the reason why he thinks a drought warning should cover a wider range of indicators and perhaps come earlier in the drought response process.

Our region consists of a county and two towns. The county uses wells, one of the towns has several wells, and the other town has a reservoir. How would you come up with a general/regional ordinance in this situation?

- The region could work with Robert to come up with a general drought index that could cover all three localities.

Every system is different, some use ground water, some use surface water, so how can we come up with indicators that will serve all of these different systems?

- Actually, surface water and ground water are one system, so indicators for surface water are related to indicators for ground water. It's all connected and can be looked at as one system.

What if we have a board that is unwilling to pass the ordinance?

- A first step may be to have Scott come down and give a talk to the board about the regulations; this is part of the DEQ's job. He may tell the board that it is a violation of state water control law not to have an ordinance.
- Tamara noted that Albemarle County has a drought response group. She wants to go talk with them about the planning process, indicators, and restrictions.

Are people starting to store water?

- Scott has seen interest in rainwater harvesting.

Should the transfer of water between localities be addressed in the plan?

- The goal of the plan is to manage the water resources of the region for the benefit of the region. Inter-jurisdictional agreements for shifting water may benefit the region as a whole in a drought, so these agreements should go in to the plan.

Say the triggers in one locality within a region indicate a drought emergency, but conditions are not as severe in another locality. Is it an ok strategy to declare the drought stages locally according to local triggers, and educate the rest of the region about the drought status in the other localities in the region, instead of declaring a region-wide emergency?

- This is an ok strategy, because if you're educating the public, then essentially the whole region would be in a drought watch.

Is an ordinance required?

- Yes, we interpret the regulations to say that a plan and an ordinance are required. An ordinance is required by 2011, for regions.

Is there going to be any money in the future?

- As long as there is not another budget cut, there will probably be some money, but it's never enough.

What do you want submitted for the DEQ website?

- The WSP staff wants every planning unit to have their own page on the DEQ WSP website where they can keep their plan up-to-date, notify citizens if the locality is in a drought, and citizens can see what the indicators are in place for their region, etc.

Closing Comments

Scott Kudlas thanked the attendees for their participation and stated that folks would be notified of the November 2007 and June 2008 workshop minutes availability via email. Scott also noted that due to the interest in these workshops that DEQ will probably host another one in fall 2008.

Note Card Comments

Workshop participants were provided with index cards to submit any issues that they wanted follow up assistance on. Note cards were collected at the end of the meeting and DEQ Water Supply Planning staff will provide follow-up to the comments from their respective regions. The following summarizes the submitted comments and general DEQ responses:

1) ***Lessons learned from recently submitted plans?***
   - If you haven't done so already, request a water supply planning program submission checklist from your DEQ water supply planner. Use this checklist as a guideline to develop your plan. Clearly described the required planning elements (9VAC25-780-70 through 130) in the plan narrative, supporting tables and figures, and/or the appendices to your plan. Make sure you identify any criteria outlined in the regulation that is not applicable or for which data was not available for your local or regional planning area. Clearly reference data sources and supporting tables/figures/appendices in the narrative of your plan. Remember this plan is essentially a comprehensive plan for water in your locality or region; as a result it will need to be thorough yet readable, implementable, and user-friendly. Collaborate with your representative DEQ water supply planner to get review and feedback on your water supply plan data and narrative as it is being developed; doing so will facilitate the incorporation of readily available data and resources and prepare you for program submission.
2) ***Citation for VWP clause requiring farmers get withdrawals permitted?***
   - The Virginia Water Protection Permit Regulation, 9VAC25-210-10 (http://www.deq.virginia.gov/export/sites/default/wetlands/pdf/9VAC25-210-Final.pdf) outlines withdrawal permitting requirements for those agricultural withdrawals occurring after July 1, 1989 and reporting requirements (pp. 22 - 23) for those excluded agricultural withdrawals (for withdrawals in existence prior to July 1, 1989 or lawfully unpermitted withdrawals initiated between July 1, 1989 and July 25, 2007).
3) ***Comment: Just getting started in water supply planning process***
   - Familiarize yourself with the Local and Regional Water Supply Planning Regulation (http://www.deq.state.va.us/export/sites/default/watersupplyplanning/documents/wspfinal.doc) and the Water Supply Planning Program Submission Checklist. Work with your DEQ water supply planner to review available data and information resources and tools to help you get started on developing your water supply plan.
4) ***How detailed should the text be describing environmental conditions in the region? For instance, endangered species – do we need to identify specific areas where those species are or just include DGIF listing of possible species?***
   - When developing the existing resource information section (9VAC25-780-90) of your local or regional water supply plan, keep the following in mind: the existing resource criteria listed in the regulation either contribute directly to the quantity and quality of our surface and ground water supply sources or are resource criteria that may be negatively impacted by future development of proximate surface and ground water sources. Your water supply plan narrative should clearly address the applicable environmental conditions in this context and summarize any applicable maps, tables and figures presenting this data/information. Many of the environmental resource conditions criteria (9VAC25-780-90) for your planning area are readily available as lists, maps, and/or figures from state and federal agency websites.
   - Regarding the endangered species example, the regulation requires that you provide "state or federal listed threatened or endangered species or habitats of concern" (9VAC25-780-90.B.1). Depending on what data is readily available for you locality/region, you should provide a listing of the state and federal listed animal species (available from the VDGIF FIW database: http://vafwis.org/fwis/) and state/federal listed plant species and natural communities/habitats of

concern (available from the DCR database: http://www.dcr.virginia.gov/natural_heritage/nhrinfo.shtml). Your plan narrative should briefly summarize and reference your data lists/tables.

- Regarding connectivity to other sections of your water supply plan, when developing the alternatives section (9VAC25-780-130.B – C), you may have to revisit the existing resource section of your plan to evaluate impacts of the various alternatives on the existing resource conditions and water sources within your planning area.

5) ***A sole source aquifer for a region in relation to the agriculture and localities***
   - A sole source aquifer (SSA) is an underground water supply designated by the Environmental Protection Agency (EPA) as the "sole or principal" source of drinking water for an area. An SSA designation prohibits new withdrawals from this source by federally funded projects. DEQ's Ground Water Characterization (http://www.deq.virginia.gov/gwcharacterization/homepage.html), Ground Water Protection (http://www.deq.virginia.gov/gwpsc/), and Water Supply Planning staff can provide technical assistance, resources, and tools to ensure the best resource information is available to sustain the resource for current and future uses in an environmentally friendly manner.
6) ***Comment: Regional meetings to include localities participating.***
   - Water supply planning meetings that include attendees from all the localities participating in the regional plan are key to the development of the water supply plan and discussing/resolving any issues encountered in the plan development process. Depending on significant water sources and priority uses in the regional planning area, we encourage inviting industry, agriculture, or other stakeholder groups to the planning team meetings to provide assistance and input on the plan's development.
